

### **REMARKS/ARGUMENTS**

This Amendment addresses the issues raised in the Final Rejection of November 25, 2005.

The subject matter of claim 8, specifying that the allowed escape amount of crystals is equivalent to 1 to 40% by weight of the crystals in the supplied slurry has been added to claim 1. Consequential changes have been made to claim 9. The importance of this feature will be discussed in the remarks that follow.

The present invention is based on the finding that if grains with an indeterminate form and a relatively small diameter in a slurry are allowed to escape through screen openings, cakes otherwise formed in a compacted state on the inside of the screen by grains with indeterminate form and a relatively large diameter won't cause excessive clogging. Also, in case where the indeterminate form grains are crystals, the purity of the recovered crystals is elevated as the impurities are concentrated in the crystals of a relatively small grain size. This is discussed in the specification at page 3, line 8 from the bottom to page 4, line 2.

These objectives are attained by controlling the escape rate to 1 to 40 wt%. That this is so is confirmed by comparing the Examples according to the present invention with the Comparative Examples included in the specification.

In the Official Action the sole issue presented is the patentability of the claims over the disclosures of Desai U.S. 5,653,673 in view of a GB patent specification to Bird Machine Company together with the text on Physics. *See* page 3 of the Official Action and the comments responding to applicants' previous submissions on page 4. All of the claims have been rejected as a group and no special attention has been given to any of the dependent claims but instead only the independent claim appears to be considered. Based upon this observation, applicants are not apprised of the examiner's position with respect to the features of claims 8 and 9. The features of claim 8 must now be considered as they are included in independent claim 1.

It is applicants' position that the combined teachings of the references do not suggest the subject matter defined by applicants' claims as above amended. In fact, one of the key references teaches the skilled person to direct his/her efforts in an entirely opposite direction and therefore is inappropriately combined with two other references and in any event is not suggestive of that which is defined by applicants' amended claims.

In GB 1065340 (Bird Machine Co.), the technical object is to provide a centrifugal separator which solves the problems that the screens have a tendency to become rapidly blinded or plugged by retention of the finer portions of the solid particles, leading to the retention of an excessively large proportion of liquid in the solids discharge as well as to the necessity for frequent interruption of the operation in order to clear the screens (*see* page 1, lines 24-30). To solve this problem GB 1065340 provides a centrifugal separator as shown in Figure 3.

The examiner states that "the prior art is still relevant to the claimed invention". Applicants disagree. In GB 1065340, in order to attain the objective, the structure of separator is carefully defined (such as diameter of the bowl etc., *see* page 3, lines 72-97). On the other hand, in the present invention, in order to prevent screen blinding, particles are allowed to escape in the defined amount. Namely, in the present invention, the objective can be attained by the positive escape of particles. Because of this the idea of means to accomplish in the present invention is completely different from that in GB 1065340.

In GB 1065340, a centrifugal separator is used for the escape. *See* page 2, lines 126- (especially lines 130-), where Bird states that the size of the apertures in the screen are "generally being controlled so that a **minimum** of fine particles is permitted to pass through the screen". (emphasis added) Further, in GB 1065340, in order to prevent the screens from blinding, the following methods are proposed:

- (i) The screen is cleaned by a plurality of spray nozzles (*see* page 3, lines 2-8).
- (ii) A large portion of the liquid is drained from the solid particles (*see* page 3 lines 31-41).

It will be clear then that in GB 1065340, there is no description nor suggestion that one may employ positive escape of particles to prevent the screens from blinding.

In Examples 1-3 according to the present invention, a centrifugal separator having a screen with larger opening size (100-150  $\mu\text{m}$ ), the liquid content is low 10-11 wt%). On the other hand, in Comparative Example 1 a centrifugal separator having the screen with smaller opening size (70  $\mu\text{m}$ ) is used and the liquid content is high (20 wt%). In Comparative Example 1, some parts of the screen became blinded. Therefore, the condition of centrifugal separator in GB 1065340 – which is permitted to pass only a minimum of the fine particles through the

screen – corresponds to that in Comparative Example 1<sup>1</sup> of applicants' specification. The method for preventing the screens from blinding in GB 1065340 is completely different from that of the present invention which is to allow positive escape of particles in a defined amount, such as Example 1 (1 wt%).

Therefore, the method for preventing the screens from blinding in the present invention is completely different from that in GB 1065340 and one of the ordinary skill in the art would be directed in the exact opposite direction by GB 1065340.

The Physics (David et al) text relates to centrifugal force and states a known physical fact or law: When the revolution number doubles, the centrifugal force also doubles.

However, this cannot be extrapolated and applied to the present invention. There is no assurance that when revolution number and centrifugal force are doubled, the escape rate would also double because generally, in the case where the grains of indeterminate form with relatively small sizes are contained in the cakes, these cakes become firm and solid due to a strong bridging action of the grains (applicants' provide this observation; *see* page 13, lines 5- of the present specification). Therefore it is difficult to calculate the escape rate from the Physics (David) text and any attempt to do so would be based upon conjecture, not fact.

From the above discussion as well as the evidence including comparative evidence contained in applicants' specification, it will be apparent that claims 1-7 and 9 as above amended define nonobvious and inventive subject matter. Reconsideration and allowance are solicited. Should the examiner require further information, please contact the undersigned.

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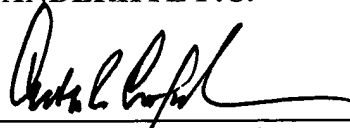
<sup>1</sup> The results presented in the original specification accompanied by the executed declaration signed by the inventors would have significant evidentiary weight, comparable to the weight given to an executed declaration. The results presented in the original declaration are not mere arguments, as alleged by the examiner. It is well established by the Federal Circuit that "the examiner must consider comparative data presented in the specification which is intended to illustrate the claimed invention in reaching a conclusion in regard to the obviousness of claims." *In re Margolis*, 785 F.2d 1029, 228 U.S.P.Q. 1123, 1129 (Fed. Cir. 1993).

ISOGAI, T. et al.  
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Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: \_\_\_\_\_



Arthur R. Crawford  
Reg. No. 25,327

ARC:eaw  
901 North Glebe Road, 11th Floor  
Arlington, VA 22203-1808  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100